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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/512,313      | 02/24/2000  | Tohru Hotta          | Q57991              | 5777             |

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EXAMINER

NGUYEN, TUAN N

ART UNIT PAPER NUMBER

2828

DATE MAILED: 07/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/512,313

Applicant(s)

HOTTA ET AL.

Examiner

Tuan N Nguyen

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-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO 1449) Paper No(s) 1. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claims 4-6, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite, vague, and confusing for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-6, 8 and 9 claim a method of manufacturing the optical pickup apparatus without the recitation of any means or devices for performing the method steps. It is not clear as how or what performs the method steps.

Claims 4-6 are confusing, vague and indefinite because it is not clear whether the claims are written in dependent form or independent form.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejection under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-5, 7-12 are rejected under 35 U.S.C. 102(a) as being taught by Mochizuki et al. (US 6097690)

With respect to claim 1, Mochizuki et al. ('690) shows in figures 5, 6, 7, 14 and the figures' discussion - an optical pickup apparatus comprising: a laser light emitting device (fig. 6 #33, #38); a deflector (fig 6 #34, #28) for deflecting laser light emitted from the laser light emitting device; a lens driver (fig. 14 #88-91) for moving an objective lens (fig. 6 #4, #5) for converging the laser light deflected by the deflector onto an optical recording disk (figure 6 #101) in a focusing direction and a tracking direction thereof; and a frame member (figure 5 #1) for supporting the laser light emitting device, the deflector (fig. 6 #30, #34) and the lens driver, wherein the deflector is positioned such that the center of the intensity distribution of the laser light is aligned with the optical axis of the objective lens.

With respect to claim 2, Mochizuki et al. ('690) shows in figures 6, 12, 19, 20 and the figures' discussion - the deflection angle of the deflector is adjusted such that a direction in which the diverging angle in a direction perpendicular to the optical axis of the emitted laser light from the laser emitting device becomes the narrowest is aligned with the radial direction of the optical recording disk.

With respect to claim 3, figures 4 and 5 (#30, #34) show - the frame member includes a base member (fig 5 #1) on which the deflector is mounted, which is configured so as to be movable in a direction parallel with the optical axis of the laser light.

With respect to claim 4, where in claim 1 recites an optical pickup apparatus and claim 4 recites a method of manufacturing the optical pickup apparatus, whereas patent ('690) showed all the elements for the optical pickup apparatus. For the reason of claim 4 and 1 recites the same or

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identical elements, it would have been obvious to one of ordinary skill in the art to use patents ('690) for the method of manufacturing the optical pickup apparatus.

With respect to claim 5, same reason as claim 4, figures 6, 12, 19, and 20 show - the adjustment of the deflection angle of the deflector is effected such that the laser light is incident perpendicularly to an aperture of the objective lens.

With respect to claim 7, figures 6, 12, 19, and 20 show - the optical axis of the laser light is aligned with the tracking direction when viewed from a direction parallel with the optical axis of the objective lens.

With respect to claims 8 and 9, same reason as claim 4, figures 6, 12, 19, 20 show adjusting the deflection angle of the deflector such that a direction in which the diverging angle in a direction perpendicular to the optical axis of the emitted laser light from the laser emitting device becomes narrowest is aligned with the radial direction of the optical recording disk, moving the deflector in a direction parallel with the optical axis of the objective lens such that the center of the intensity distribution of the laser light is aligned with the optical axis of the objective lens.

With respect to claim 10, Mochizuki et al. ('690) shows in figures 2, 5, 14, 21 an optical pickup apparatus comprising: a laser light emitting device (fig. 6 #33, #38); a lens driver (fig. 14 #88-91) for moving an objective lens for converging the laser light deflected by the deflector (fig 6 #34, #28) onto an optical recording disk (figure 6 #101) in a focusing direction and a tracking direction thereof; and a frame member (fig 5 #1) for supporting the laser light emitting device and the lens driver wherein the optical axis of the objective lens is aligned with the center of the intensity distribution of the laser light.

With respect to claim 11, figures 6, 12, 19, and 20 show wherein a direction in which the diverging angle in a direction perpendicular to the optical axis of the emitted laser light from the laser emitting device becomes the narrowest is aligned with the radial direction of the optical recording disk.

With respect to claim 12, figures 6, 12, 19, and 20 at least one of the laser emitting device and the objective lens (fig 12 # 4,5, 38) is adjusted such that the optical axis of the objective lens is aligned with the center of the intensity distribution of the laser light.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 6097690), in view of Yamakawa et al (US 5963535)

With respect to claim 6, Mochizuki et al. ('690) shows in figures 6, 7, 12, 19 and 20 - an optical pickup apparatus comprising: a laser light emitting device; a deflector for deflecting laser light emitted from the laser light emitting device; a lens driver for moving an objective lens for converging the laser light deflected by the deflector onto an optical recording disk in a focusing direction and a tracking direction thereof; and a frame member for supporting the laser light emitting device, the deflector and the lens driver, wherein the deflector is positioned such that the center of the intensity distribution of the laser light is aligned with the optical axis of the objective lens. Where the deflection angle of the deflector is adjusted such that a direction in which the diverging angle in a direction perpendicular to the optical axis of the emitted laser light from the laser emitting device becomes the narrowest is aligned with the radial direction of the optical recording disk. Mochizuki also provide control means in figure 14 that can be used in adjusting the deflector. Where as the claim requires to adjust the deflector angle, Yamakawa ('535) shows in figures 10 an adjusting device that can be used to adjust the deflector angle. It would have been obvious to one of ordinary skill in the art to provide Mochizuki et al. ('690) with the limitations as taught or suggested by Yamakawa ('535) to create steps in providing an adjuster for adjusting the deflection angle of the deflector in a first axial direction parallel with a direction in which the diverging angle of the laser light emitted from the laser light emitting device becomes the narrowest and a second axial direction parallel with a direction in which the diverging angle of the laser light becomes the broadest, and for moving the deflector in the direction parallel with the optical axis of the laser light, setting the deflector to the adjuster so as to be supported thereby before the adjusting step; and bonding the deflector onto the frame member after the moving step together with the adjuster supporting the deflector, wherein the adjusting step and the moving step is effected by the adjuster.

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*Citation of Pertinent References*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Mochizuki et al. (US 6172958) disclosed optical disc has object lens for converging light beams from light source to optical disc.

Saito et al. (US 6137765) shows an optical disc drive apparatus include reference base and adjustable inclination angle.

*Communication Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on Monday - Friday from 7:30-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8592 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



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